

# HENRI BERESTYCKI

## Current position

Professor, École des hautes études en sciences sociales (EHESS),  
PSL University, Paris  
Chair of Mathematical analysis and modelling  
54 boulevard Raspail  
75006 – Paris, France

Phone (EHESS): +33 1 49 54 20 33

Assistant: +33 1 49 54 20 41

Cell phone: +33 6 74 08 44 32

e-mail: [hb@ehess.fr](mailto:hb@ehess.fr)

Web page: <http://www.ehess.fr/centres/cams/person/berestycki>

ReaDi project: <http://readi-project.weebly.com/>

## Personal

Date of birth: March 25, 1951

Place of birth: Paris, France

Citizenship: France

## Professional career

Since 2001, Professor, École des hautes études en sciences sociales, PSL University, Paris  
(of exceptional class)

2015–2017, Dean of Research, PSL University, Paris

2005–2014, Visiting professor, Department of mathematics, University of Chicago, (one  
quarter per year)

2010–2012 Director of Financial Mathematics MSc Program, the University of Chicago

1989–1999, Professor at École normale supérieure, Paris

1988–2001, Professor at Université Pierre et Marie Curie, (Sorbonne universités)

Since 1994, Professor of exceptional class

1987–1999, Professor (part time position), École Polytechnique

1983–1988, Professor at Université Paris-Nord

1977–1983, Researcher at CNRS, Laboratoire d'Analyse Numérique, Université Pierre et  
Marie Curie (Paris VI)

1975 – 1977, L.E. Dickson instructor, Department of Mathematics, University of Chicago

## Education

Habilitation (Doctorat d'État ès Sciences), 1981, Université Pierre et Marie Curie (Sorbonne Universités)

PhD, Université Pierre et Marie Curie (Sorbonne Universités), 1975, advisor: H. Brezis

École Normale Supérieure, Paris, 1971 – 1975

## Research interests

Partial differential equations, nonlinear analysis, calculus of variations, mathematical physics, qualitative theory of nonlinear elliptic and parabolic equations, mathematical modelling of combustion, free boundary problems, reaction–diffusion equations, propagation phenomena, mathematical models in finance and economics, modelling in social sciences, models in biology and ecology.

## Awards and Recognition

Honorary Professor, Harbin Institute of Technology, 2017

Sackler Scholar, Institute of Advanced Study, Tel Aviv University, 2017

Foreign Honorary Member, American Academy of Arts and Sciences, 2013

Fellow of the American Mathematical Society, 2013

Knight of the French Legion of honor, 2010

Sophie Germain prize, French Academy of Sciences, Paris, 2004

Humboldt – Gay-Lussac Prize, Humboldt Foundation, Germany, 2004

Carrière prize of the French Academy of Sciences, Paris, 1988

## Major grants

NSF focussed research grant (FRG), 2011-2014, DMS-1065971, (CI), *Collaborative Research: Emerging Issues in the Sciences Involving Non-Standard Diffusion*, with Luis Caffarelli, Yanyan Li, Fanghua Lin and Luis Silvestre.

European ERC advanced grant (“Senior”) 5 year grant for the period 2013-2018, project “ReaDi”, *Reaction-Diffusion Equations, Propagation and Modelling*.

## Distinguished lectures

2018 Coxeter Lectures, Fields Institute, Univ. of Toronto, March 2018

Joe Keller Lecture, Stanford University, October 2017

Mortimer and Raymond Sackler Institute of Advanced Studies lecture, University of Tel-Aviv, May 2017

Institute for Advanced Study Distinguished lecture, Hong Kong University of Science and technology, February 2017

Wolfgang Wasow distinguished lecture, University of Wisconsin, Madison, 2011,  
(<http://www.math.wisc.edu/wolfgang-wasow-lectures>)

Annual Alan Tayler lecture, Oxford University, 2006,  
(<http://www.smithinst.ac.uk/Events/AlanTaylerEventList>)

Joseph D'Atri lectures, Rutgers University, Fall 2006,  
(<http://www.math.rutgers.edu/events/datri-lectures.html>)

Ordway distinguished visitor, University of Minnesota, Minneapolis, spring 2006

Invited plenary speaker at the *International Congress of Industrial and Applied Mathematics*, ICIAM, Edinburgh, 1999

One month visiting professorship of the *Japanese Society for Promotion of Science*, 1998

### **Selected invited lectures**

Plenary speaker, 6th International Conference on Mathematical Modelling and Analysis of Populations in Biological Systems (ICMA-VI), University of Arizona, Tucson, October 2017

Plenary speaker and public lecture, biannual congress, Unione matematica italiana, Siena, 2015

Plenary speaker, ECCS10, European Conference in Complex Systems, Lisbon, 2010

Plenary lecture, biannual congress of the Italian Society of Applied Mathematics (SIMAI), Chia Laguna, 2002

Plenary lecture, British Mathematical Colloquium, Glasgow 2000

Plenary speaker, annual meeting, Japanese Mathematical Society, Osaka, 2000

Invited Address, American Mathematical Society Regional Conference, Providence, October 1999

Symposium of the Taniguchi Foundation (Japan), 1989

### **Editorial boards of scientific journals**

Annales de l'Institut Henri Poincaré, Analyse non linéaire.

Interfaces and Free Boundaries (2002-2013)  
Annali di Matematica Pura ed Applicata  
Journal of the European Mathematical Society (2002-2015)  
Networks and Heterogeneous Media  
Journal of Differential Equations  
Analysis in Theory and Applications (since 2016)  
Communications in Contemporary Mathematics (since 2016)

### **Visiting positions**

University of Chicago, Courant Institute NYU, Institute of Advanced Study in Princeton, Berkeley, MIT, Rome, Tokyo etc.

### **Previous services**

Dean of Research, PSL University, Paris, 2015–2017  
Director, Centre d’analyse et mathématique sociales, CNRS - EHESS Research unit (UMR 8557), 2002–2013  
Vice – President, EHESS, 2004-2006  
Member of the scientific board of the program *New interfaces of mathematics*, French Ministry of Research and CNRS, 2003, 2004  
Coordinator of the international program *Dynamics of reactive fronts*, Centre Émile Borel, Institut Henri Poincaré, Paris, autumn 2002  
Director of the NATO Advanced Scientific Institute, Cargese : *PDE’s in Models of Superfluidity, Superconductivity and Reactive Flows*, June-July 1999  
Member of the French National Committee of the Universities, 1992 – 1995  
Director of the Mathematics Department UFR 921, University Pierre et Marie Curie, (Sorbonne Universités), 1989 – 1994  
Organizer of several scientific meetings (including two in Oberwolfach, one at IMA, in Minneapolis, and one at a Regional Conference of the American Mathematical Society in Providence)

### **Research mini-courses and series of lectures in the past four years**

June 2016, University of Alberta, Edmonton, *Séminaire de Mathématiques Supérieures, Dynamics of Biological Systems*

July 2015, IMPA, Rio de Janeiro, *International Workshop on Elliptic and Kinetic Partial Differential Equations*

June 2015, Universitat Politècnica de Catalunya, Barcelona, *Workshop of interactions between dynamical systems and partial differential equations (JISD2015)*

May 2015, Granada (Spain), *Emergence and self-organization in social and biological systems*

June 2014, CIME, Cetraro Italie, Summer school *Partial differential equations and geometric measure theory*, series of courses on Reaction-diffusion and propagation in non-homogeneous media.

April 2014, Torino, Scuola di Studi Superiori di Torino, *Mathematical methods for social sciences*

July 2013, FMSP, University of Tokyo, *Summer school on Solitons and traveling waves in non-integrable systems*

February-March 2013, Institut de Physique théorique, CEA, Saclay, France, *Cours de physique théorique de l'IPhT*

February 2013, University of Rome "La Sapienza", *Winter school on Fast and anomalous diffusion*

## **PhD students (30)**

Flavio Dickstein, 1982 (Professor, Univ. Federal de Rio de Janeiro, Brasil)

Farid Ammar Khodja 1982 (Assistant professor, Univ. Besançon)

Bernard Larrouturnou, 1987 (Former professor à l'École Polytechnique, President of Institut National de la Recherche en Informatique et Automatique (INRIA) and General Director of CNRS, presently Director of agency, French Ministry of Ecology, Sustainable development, Transportation and Housing)

Frank Merle, 1987 (Professor, Univ. Cergy Pontoise and IHES, formerly member of Institut Universitaire de France)

Enrique Fernandez-Cara, 1988 (Professor, Univ. Sevilla, Spain)

Mythily Ramaswamy, 1990 (Professor, Tata Institute, Bangalore),

Leo Glangetas, 1990 (Professor, Univ. Rouen)

Jean-Michel Roquejoffre, 1991 (Professor Univ. Toulouse and formerly member of Institut Universitaire de France)

Alexis Bonnet, 1992 (Formerly Professor Univ. of Cergy-Pontoise, and financial engineer; presently founder and CEO of “Methodology” fund)

Sonia Sellami-Omrani, 1993 (Hightschool professor)

Elisabeth Logak, 1993 (Professor, Univ. of Cergy-Pontoise)

Thomas Lachand-Robert, 1993 (Professor Univ. Chambéry, †2006)

François Hamel, 1996 (Professor Univ. Aix-Marseille, Institut Universitaire de France)

Amandine Aftalion, 1997, (Researcher, CNRS)

Jéôme Busca, 1998, (Researcher CNRS, presently working in a hedge fund, New York)

Régis Monneau, 1999 (Researcher, École Nationale des Ponts et Chaussées, CERMICS)

Boyan Sirakov, 2000 (Associate Professor, PUC, Rio de Janeiro)

Stéphane Crépey, 2001 (Professor, University d’Evry)

Nicolas Bacaer, 2002 (Researcher, ecology epidemiology and populations, Institut de Recherche pour le Développement)

Jérôme Coville, 2003 (Researcher, ecology at INRA - National Institute of Research in Agronomics, Avignon)

Lionel Roques, 2004 (Researcher, ecology at INRA, Avignon)

Yonathan Ebguy, 2005 (Financial engineer, HSBC, London)

Christelle Robinet, 2006 (Researcher, ecology at INRA, Orléans)

Luca Rossi, 2007 (as of 2015, researcher CNRS, EHESS, formerly Assistant Professor, Università di Padova, Italy, )

Grégoire Nadin 2008 (Researcher, CNRS, University Paris VI)

Mauricio Labadie, 2011 (Private sector)

Hoang Hung Vo, 2014 (Assistant professor, Vietnam)

Juliette Bouhours, 2014 (Postdoctoral fellow, École Polytechnique, Paris - Saclay, previously Postdoctoral fellowship, CNRS-PIMS, University of Edmonton, Canada)

Laurent Dietrich, 2015, Postdoctoral fellow (as of september 2015), Department of Mathematics, Carnegie-Mellon Univeristy, Pittsburgh

Antoine Pauthier, 2016, Dunham Jackson Assistant Professor, University of Minnesota, Minneapolis

Francesca Aceto, 2016, co-supervision of thesis in History with Jean-Claude Schmitt

Currently advisor of 3 PhD students, one of whom is to defend his thesis in 2017-2018.